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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/519,119	12/23/2004	Daniele Fregonese	102792-386(11050P4)	4877

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EXAMINER	
KUMAR, PREETI	

ART UNIT	PAPER NUMBER
1796	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/519,119	FREGONESE ET AL.	
	Examiner	Art Unit	
	PREETI KUMAR	1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 December 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-27* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Final Rejection

1. Claims 1-27 are pending.

Response to Amendment

2. The rejection of claims 1-27 under 35 U.S.C. 112, second paragraph, is withdrawn in light of Applicant's amendment to the claims.

3. The rejection of claims 1-27 under 35 U.S.C. 103(a) as being unpatentable over Olsen et al. (US 5,122,159) is maintained.

4. The rejection of claims 1-27 under 35 U.S.C. 103(a) as being unpatentable over Conner et al. (US 6,395,701) is maintained.

Response to Arguments

Applicant's arguments filed 12/14/2007 have been fully considered but they are not persuasive. Applicant's urge that Olsen et al. does not teach of the claimed composition comprising an enzyme and stabilizing aid having 5 to 60% water and a non-aqueous component wherein at least 70% of the non-aqueous component comprises a water soluble ionic salt. Also, Applicant's urge that the prior art teaching of Olsen et al. does not recognize the enzyme stability arising from the specific combination of the non-aqueous component comprising at least 70% water soluble ionic salt and 5 to 60% water.

In response, the instant claims are to a composition comprising an enzyme, stabilizing aid, 5-60% water, and a non-aqueous component with at least 70% of the non-aqueous component being a water soluble ionic salt. The prior art teaching of

Olsen et al. also teaches a composition comprising enzyme, propylene glycol (stabilizing agent & water miscible organic solvent), 40% monosodium/disodium phosphate salt and 11% or 48% or 51% water. Olson et al. motivate one of ordinary skill to modify the salt in an amount of 20-60 wt %. See tables 3 and 5. Also, in col.9, Olson et al. motivate one of ordinary skill to optimize the amount of alkali metal salts in an amount of upto 50% of the total composition not just the non-aqueous portion. Also, Olson et al. motivate one of ordinary skill to optimize the amount of water depending on the consistency and concentration of the gel or liquid concentrate. See tables 5, 7, and 8. Finally, Olson et al. motivate one of ordinary skill to optimize the amount of salt and water in the composition specifically to formulate a uniform dispersion of enzyme. See col.13, ln. 5-40, where Olson et al. teach preserving or enhance the enzyme activity by combining the cellulase enzyme with the inorganic (alkali metal or alkaline earth metal) hydratable carbonate, bicarbonate, silicate or sulfate in an aqueous slurry containing sufficient water to cause the hydration and solidification of the inorganic components. The slurries can be made at elevated temperatures to reduce viscosity and increase handleability. The inorganic slurry compositions can then be cast in molds and after solidification can be removed from the mold and packaged. The organic enzyme concentrate compositions can typically be made by slurrying the enzyme material in a melted polymer matrix that can contain water for viscosity control purposes.

Applicants urge that Connor et al. lacks disclosure of modifying variables to achieve enzyme stability, to provide the specifically claimed combination of a non-aqueous components comprising at least 70% water soluble ionic salt and 5 to 60%

water in the composition to stabilize the enzyme. Contrary to Applicant's arguments, in col.93, ln.25, Conner et al. specifically motivate one of ordinary skill to modify variables to inhibit the biodegradable actives to form stable dilute or concentrated liquid enzyme compositions. See col.93, ln.25-35. Also, Conner et al. teach one of ordinary skill to optimize the amount of phosphates and polyphosphates, especially the sodium salts; carbonates, bicarbonates, sulfates, in an amount of about 5% to about 50% of the total liquid composition not just the non-aqueous portion. See col.61,ln.55-col.62,ln.40. In examples II and VIII in col.98 and 101 motivate one of ordinary skill to modify the amount of water from 0.5% to about 50% to form the desired diluted or concentrated liquid softener composition. See col.94,ln33-40.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

5. Claims 1-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Olsen et al. (US 5,122,159).

Olsen et al. teach a boron free, aqueous detergent composition comprising surfactant, cellulase enzyme, water soluble solvent, and water soluble alkali metal salt. See col.12,tables 5-7.

Regarding the water soluble solvent, Olsen et al. teach propylene glycol. See col9,ln.5-10.

Olsen et al. teach 0-50% of one or more builder components selected from alkali metal salts and high molecular electrolytes such as polyacrylic acid, starch, sugars and

hydratable alkali metal or alkaline earth metal inorganic salts that can solidify through hydration. Such compositions include sodium, potassium or calcium, carbonate, bicarbonate, tripolyphosphate silicate, and other hydratable salts. See col.9,ln.15-35, 60-65 and co.10,ln.15-20.

Regarding the thickener, Olsen et al. provide motivation to manufacture in the cellulase treatment composition in the form of a thickened liquid or a gel since the thickened or gelled compositions tend to maintain the uniformity of the enzyme containing compositions and can ensure that the enzyme treatments are uniform. Such thickeners include organic and naturally occurring polymers such as ethylene vinyl acetate copolymers, polyethylene waxes, acrylic polymers, cellulosic polymers including carboxymethyl cellulose, carboxyethyl cellulose, cellulose acetates, ethoxylated cellulose, alkanolamides, waxy alcohols, and others; magnesium aluminum silicates, bentonite clays, fumed silica, xanthan guar gum, algin derivatives, polyvinyl pyrrolidone, di and tristearate salts, and other conventional thickeners. See col.10,ln.30-50.

Regarding the water soluble encapsulating agent, Olsen et al. teach palletizing the enzyme using well known pressure pelletizing techniques in which the cellulase enzyme in combination with a binder is compacted under pressure. See col.8,ln.15-20.

Olsen et al. teach an enzyme concentration of at least 1000CMC units of enzyme per liter of solution in the aqueous composition. See col.10,ln.50-55. Olsen et al. teach that the use of cellulase enzyme preparations is known in laundry cleaning or detergent compositions that are designed for soil removal typically contain surfactants (typically anionic), fillers, brighteners, clays, cellulase and other enzymes (typically proteases,

lipases or amylases) and other laundry components to provide a full functioning laundry detergent preparation. The cellulase enzymes in combination with the surfactants used in common laundry compositions for cleaning apparently can remove particulate soil and can restore the new appearance of clothing items. See col.3,ln.20-25.

Olsen et al. do not specifically teach a detergent composition comprising the claimed ratio of water soluble ionic salt and the claimed viscosity, migration speed, and density as recited by the instant claims.

It would have been obvious to one of ordinary skill in the art, at the time the invention was made to arrive at a composition comprising the claimed percentage of water soluble ionic salt as recited by the instant claims, because Olsen et al. provide one of ordinary skill the motivation to modify the salt in an amount of 20-60 wt % of the total composition not just the non-aqueous portion. Also, it would have been obvious to one of ordinary skill in the art, at the time the invention was made to arrive at a composition comprising the claimed viscosity, migration speed, and density as recited by the instant claims because Olsen et al. provide one of ordinary skill the motivation to arrive at a composition comprising the same components which would be reasonable expected to have the same properties. See tables 5-7.

6. Claims 1-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Conner et al. (US 6,395,701).

Conner et al. illustrate a liquid laundry detergent composition comprising water, 0-5% PAA thickener, 0-5% protease, cellulase and amylase enzymes, and 0-2%

solvent, and 20-30% carbonate salts. See col.98,example II. Formulation I specifically suggests a boron-free aqueous composition.

Regarding citrate salts, Conner et al. provide motivation to one of ordinary skill to include citric acid and soluble salts thereof as important carboxylate builders in heavy duty liquid detergents, due to availability from renewable resources and biodegradability. See col.63,ln.1-5.

Regarding the ionic salts, Conner et al. teach one of ordinary skill to optimize the amount of phosphates and polyphosphates, especially the sodium salts; carbonates, bicarbonates, sulfates, in an amount of about 5% to about 50% of the liquid detergent compositions. See col.61,ln.55-col.62,ln.40.

Regarding the water miscible solvent, Conner et al. teach water soluble solvents like ethanol, isopropanol, propylene glycol, 1,3-propanediol, propylene carbonate, etc., See col.16,ln.5-10.

In col.81-82, Conner et al. teach thickeners, gelling agents and emulsifiers, dyes and fragrances may be included in the detergent compositions.

Conner et al. do not specifically teach a non-aqueous component with at least 70% water soluble ionic salt and the claimed viscosity, migration speed, and density as recited by the instant claims.

It would have been obvious to one of ordinary skill in the art, at the time the invention was made to arrive at a composition comprising a non-aqueous component with at least 70% water soluble ionic salt as recited by the instant claims, because Conner et al. provide one of ordinary skill the motivation to optimize the amount of

phosphates and polyphosphates, especially the sodium salts; carbonates, bicarbonates, sulfates, in an amount of about 5% to about 50% of the total liquid composition not just the non-aqueous portion. See col.61,ln.55-col.62,ln.40. Also, it would have been obvious to one of ordinary skill in the art, at the time the invention was made to arrive at a composition comprising the claimed viscosity, migration speed, and density as recited by the instant claims because Conner et al. provide one of ordinary skill the motivation to arrive at a composition comprising the same components and would be expected to have the same properties of viscosity, migration speed, and density as recited by the instant claims. See col.98,example II.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to PREETI KUMAR whose telephone number is (571)272-1320. The examiner can normally be reached on 7:30 am-3:30 pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 571-272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/P. K./
Examiner, Art Unit 1796

/VASUDEVAN S. JAGANNATHAN/
Supervisory Patent Examiner, Art Unit 1796